Exterminators Log

SCIENCE • PHILOSOPHY • HUMANITARIANISM

MAY 1934 VOL. 2, NO. 5

SPECIAL FEATURES

THE NATIONAL CONVENTION
THE WAGNER BILL
FUMIGATION ORDINANCE
THE CODE AND THE NATIONAL ASSOCIATION
FUMIGATION OF FOODSTUFFS
HISTORY OF TERMITES
EVEN RADIO FIGHTS TERMITES

The Incessant

Monthly Repetition

of the Log

Has Proved the

Shortest Path

to Reach

THE

EXTERMINATING

INDUSTRY

EXTERMINATORS LOG

A Magazine Devoted to a Cause to Which Mankind Is Indebted

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Official Organ of the National Association of Exterminators and Fumigators, Inc.

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Active: Open to any person, firm, association or corporation engaged in the business of eliminating and/or controlling vermin, rodents, insects, germs, other pests and odors by the process of extermination, fumigation and/or disinfection. Dues, $10 per year.

Associate: Open to subsidiary firms of an active member firm doing business within the same immediate city territory. Dues, $7.50.

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EDITORIAL

THE IMPORTANCE OF ORGANIZATION

The bold headlines "Play Ball' stood out on the front page of a local news paper. The game was played in great form in the afternoon at the ball park. Every man on each team gave everything he had in him. Each player did his best. Each player knew just what to expect from other members of his team. Why? Because they knew that without a definite system of organization coupled with intelligent cooperation, no ball team could expect to win games.

The purpose of the ball game was to entertain its many thousands of spectators who paid their admission fees to see a great performance. They proclaimed their satisfaction at the close of the contest, not because one contender was triumphant and the other went down in defeat, but because both teams put up a great fight, and played their best.

So organization brings out the full strength of collective individuals. The combined power of hundreds of men, concentrated into a powerful steam shovel can move mountains.

Base ball, however, is not the only activity that calls for combined effort. In playing the game of life, even among many forms of lower animals, cooperation of the individuals is the keynote of success. Yes, in many instances, their very existence and continuance of their species depend upon their ability to cooperate. The social wasps would no doubt soon perish off the face of the earth except for their habit of helping each other. The female who weathers the blasts of winter to lay the first few eggs previously fertilized by a male who has died during the fall or winter, prepares but a small nest, with room for but a very few eggs. She does not think (insects do not think) or reason that those few eggs will or will not be sufficient. Nature has provided the wasp with sexually undeveloped females or daughters who will share all the labors of further home making with their mother. From the time the first eggs hatch until the colony is perhaps numbering in the hundreds, a system of cooperative organization is in force.

A beautiful illustration of the lower animals and cooperative development among them is the colony ant and the termite. So well are their duties and labors divided and coordinated that they seem little short of human. Certain ones tend the aphids or ant cows which. when called upon by their herdsmen. yield a milky secretion which seems to be a delightful drink for the ants. Some of the ants serve as living honey bags, eating so much of the sweet nectar gathered by the ants that their abdomens become several times enlarged by it. When members of the colony desire some sweet. they let it be known to the "honey bags," hanging suspended from the ceiling of a closely guarded chamber of the underground palace. and some honey will obligingly be regurgitated for them. Other ants are soldiers, and actually go forth to battle the enemy. They march as an army, well organized and disciplined, and not as a disorganized mob. Still other ants of the colony spend their entire lives as nurse maids. They tend the tiny eggs and larvae, bathing and feeding and moving them from place to place as danger or unfavorable living conditions develop. What would become of such creatures if their system or ability to cooperate should suddenly disappear? Complete failure, and probably, ultimate extermination would result.

We could run the scale, from the simpler, lower animals to the most complicated of them all. The ant colony, the wolf pack, banded together to help each other in hunting food, the buffalo herd, collectively defending the herd from enemies, and now man who has learned from experience that more can be accomplished collectively than individually. For many centuries he has organized into tribes, states and nations. He has organized schools, churches and business organizations that he might educate his children, worship, protect himself from unscrupulous fellowmen and conduct his business projects with greater skill, efficiency and safety. If ants and bees have developed and maintained altruistic organizations with instincts only to guide them, how much more certain does it seem that man, crowned with the glorious advantage of brains and reason, must yield to such necessity.

Perhaps one may wonder why all this excitement about organization and cooperation when leaders of industries recognize that its necessity is an established certainty. But that is just the point. Many do not realize its significance and the dependence of our own industry on cooperation among the individuals of our own industry. Practically every other industry is ahead of the exterminators in such organization work. True, we met in Washington and formally organized a national association. And let the LOG go on record as congratulating the organization in its having selected able leaders and officers. We also want to congratulate the organization for the splendid work that has been done so far. But we want to assure each member of our organization, and every exterminator who isn't, but should be a member that his cooperation, his help, his moral and physical support is needed and must be obtained if the organization is to serve us best.

Unfortunately, some of our members have not yet formed their local societies. That is the first hurdle. The national organization stands ready to help those who want it, but each local unit must first function at home before they can expect to serve or be served properly by the National Association. The LOG has endeavored to be of service to the National Organization, and to the industry in general, and we hope that the members will enable us to do more work for them by supporting the LOG. We are glad to announce that as we anticipated all along, the LOG has grown as moves for organization have developed. And we believe the LOG will become more beneficial to the industry as the number of individuals yet uncertain relative to the benefits of the organization or the LOG, and not now supporting either, sense their responsibility, get behind them and support them as they do their own private businesses.

Our businesses have suffered unfair methods and dealings from unfair competitors long enough. This is no time to equivocate. There must be no halfway ground. Either we must cling together and work for the common good of our industry or subject ourselves again to the ravages that have befallen us since the industry organized. What shall we do? Shall we wait and see what a few are trying to do, or shall we put our shoulders to the wheel and keep moving. United, we will be able to make our industry a respected one. Divided, we can expect to remain in a desperate struggle (in many instances it is likely to be a losing one) for existence. The LOG takes this opportunity to urge each member to labor with his fellow competitors. Insist that our membership become one hundred percent, and that our purpose and intent become as one. That, and nothing else can ever make ours an industry that will not only make for us a more pleasant balance sheet, but one that will be respected as it should and deserves to be.

New Post Office Regulations Governing the Mailing of Insecticides

Postmaster General's office, on March 16th, issued the following amendments to the Postal Laws and Regulations:

Paragraph 4 of Section 590, is amended by adding the following subparagraph (f): Insecticides, fungicides and germicides, when accepted for mailing must be in inside containers of metal, glass, or fiber cans or boxes and in outside containers of metal, wood or fiber board, tightly closed and securely fastened. When in liquid form, the inside container must not only be surrounded with sufficient absorbent material to absorb all the liquid should the container be broken, but packed in cushioning material. (Excelsior is not considered an absorbent.) When in solid or powdered form, the inside container must be surounded with cushioning material.

Paragraph 4 of Section 588, is amended by adding the following as paragraph 4 (aa): Insecticides, fungicides and germicides not outwardly or of their own force dangerous or injurious to life, health or property, and not in themselves unmailable (see Sections 569 and 598) shall be admitted to the mails for transmission in the domestic mails when securely packed for safe transmission: Provided, that the container of the article mailed is plainly labeled to show its contents, is also marked "poisonous composition," and bears the label or superscription of the manufacturer thereof."

Surgeon General Appoints Fumigant Board

Dr. Cummings, Surgeon General, U. S. Public Health Service, has appointed a board to consider questions with respect to fumigation ordinances and fumigants.

This board is to meet from time to time at the call of the Chairman. The Board is composed of the following officers: Assistant Surgeon General F. A. Carmelia, Chairman; Senior Surgeon H. F. White, Member; Surgeon R. R. Sayers, Recorder.

The National Convention

At St. Louis, Missouri, October 1, 2, 3, 1934

By W. E. MARTIN, Convention Committee

To every Exterminator and Fumigator this convention should be the outstanding event of 1934.

As a matter of course the St. Louis Society of Exterminators and Fumigators has set out to make this Convention of real value to each member of the industry.

We expect to have speakers who by their Educational, Technical and Practical experiences will be able to discuss the latest development of insect control.

Talks on various problems that arise from time to time to plague the average Exterminator and Fumigator! This will be something concrete, that you can take back home with you and use it for the betterment of your business, or perhaps to increase your income.

Then there is the personal contact, of becoming acquainted with the leaders of the profession you have chosen for your life's work.

Up to now we have only mentioned the material things, the dollar and cents appeal to your business acumen; these alone will repay any Exterminator or Fumigator who attends this convention handsomely.

But there is another side, the esthetic side of your nature that we want to appeal to. We want you to come to St. Louis and get a taste of the peace and tranquility of its many beautiful homes and shady streets, we want you to feel the warm glow of welcome that seems to rise and greet you the moment you enter the portals of old St. Louis which seems to grow stronger as your stay lengthens. We intend to take you to see beautiful Shaws Gardens, with its myriad of beautiful, rare and strange flowers. You can't afford to miss this.

Then to drive you through wonderful Forest Park, home of the best kept zoo in the World, "the open air Municipal Theatre," also "The Lindbergh Trophies." The Municipal Theatre will be closed at this time, but you will be able to see its natural and beautiful setting. Then we will take you by Riverview Drive to beautiful Chain of Rocks Park from where you can see the majestic Mississippi lazily wending its way to the Gulf.

On Tuesday, October 2nd, 7 P. M., you will be privileged to see the Veiled Prophets Parade, something so beautiful that you will always remember it with a thrill of pleasure.

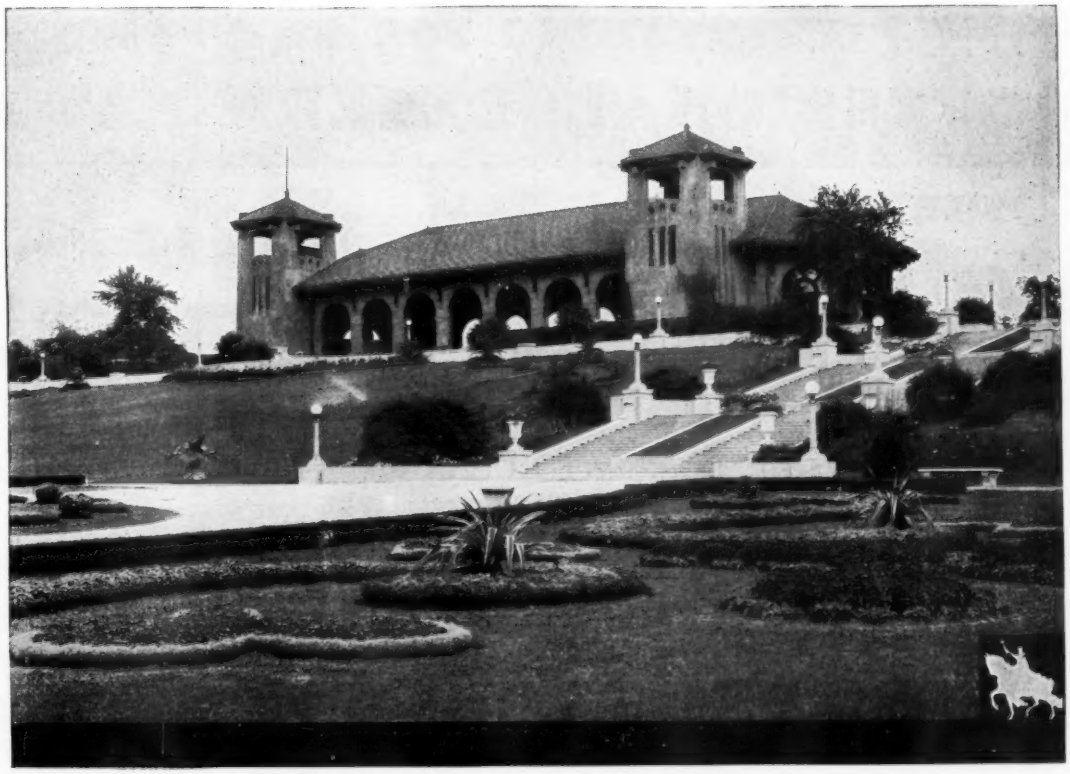
Of course, in a short article of this kind it would be impossible to mention all the points of interest that the visitor to the convention will be able to view.

But St. Louis abounds in places of historical interest and is unsurpassed by few cities in natural beauty and whose reputation for hospitality is a National byword. Come and visit with us, we want you with us on October 1-2-3, 1934. Headquarters will be in the Statler Hotel, 10th and Washington. We have obtained very reasonable rates. Be sure and make your reservations early.

St. Louis—The Convention City

A Few of Its Beautiful Scenes

(Additional Scenes on Page 14)



Shelter House - Forest Park - St. Louis, Missouri

The Wagner Bill—Its Effect if a Law

If the Wagner Bill, now before Congress, is passed in its present form, it will impose not only collective bargaining with unions to a degree difficult to believe, which were hardly contemplated under Section 7(a) of the N. I. R. A., but it will impose completely organized labor on all industry.

Should this come about, the exterminating and fumigation service industry, which heretofore has never been bothered with unions, will almost become a closed shop industry. The relationship of employer to employee will be subject to constant interventions of outside third parties. Company unions will not be permissible; they will be thrown out by Congressional fiat. Peaceful working employees, which have been the rule within our industry, will be organized from outside. Under such arrangement the employer's position is reduced to supine compliance.

Anyone who has not been through and experienced all the griefs and responsibilities of owning or managing an exterminating or fumigation service organization, is incapable of comprehending its problems. The service man or other employee can go home at night, leaving his work behind him, but not so with the management.

Supporters of the Wagner Bill seem to believe that employers are a race of super-super-men who can extract money at will from the public. Perhaps this is true of some industries that may have a monopoly on an essential product, but certainly it is not true in our industry. Real estate is our basic source of income and it cannot be said that landlords are in position to pay much more than at present. A little increase when requested by our industry is meeting with cancellation of services because of inability to pay. If it should be passed in its present form, this bill makes possible impossible wage demands. A union can order a strike and the employers submit even though most employees are not in sympathy with such strikes. Indeed, under the bill a worker who replaces a striker is specifically restricted from being considered as an employee.

Something that may well be termed fundamentally fair, seems to be lacking in the philosophy of this bill. If Congress imposes a closed shop on all industry and if organized labor is to be thrust upon us, it seems only fair and reasonable that organized labor should have the often abused weapon of "strike" removed from its hands, and should be compelled to submit its differences with employers to some form of compulsory arbitration.

RATS ARE WORLD'S GREATEST TRAVELERS

The world's greatest traveler is the rat. He goes to the ends of the earth, beating his way by various means, but oftenest by ship. Many countries now have a law that a ship entering a port must be fumigated by something strong enough to kill all the rats aboard. Deadly hydrocyanic gas — instant death to rat or man — is mostly used.

The gas is generated in containers placed about the vessel, the operation being started simultaneously in all parts at a signal. Every member of the crew must be accounted for before the work is commenced. All openings are closed and the gas reaches every part of the vessel.

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A Fumigation Ordinance

To Be Discussed By National Fire Protection Association

Editor's Note: This article was written before the Convention took place and at this publishing date no definite word has been received as to action taken.

A meeting of the National Fire Protection Association is being held in Atlantic City on May 14-17th. Among the items being submitted for consideration is a Model Fumigation Ordinance. Mr. Eugene Arms of 230 East Ohio Street, Chicago, is Chairman of the Committee on Fumigation Hazards. A sub-committee, which has handled all details, is made up as follows:

Mr. H. S. Smith, Carbide and Carbon Chemicals Corp., Chairman; Mr. H. L. Miner, Manufacturing Chemists Association of U. S.; Mr. E. C. Duff, Canadian Fire Underwriters Association; Dr. R. C. Roark, U. S. Department of Agriculture; Mr. E. W. Fowler, National Board of Fire Underwriters.

The National Fire Protection Association has been trying to develop what is termed a Model Fumigation Ordinance, over a period of several years.

Admittedly this is a very strange organization through which this type of legislation should be fostered. Commercial fumigation work has been done in this country many years, and there is no known record of fires caused by our industry that would seem to warrant the intrusion of such a group. To advance the theory of potential fire hazards, and we can think of no other theory within reason, is indeed fallacious in view of past experience. It would be just as reasonable, possibly more so, if our industry were to agitate and promote legislation that might restrict the use of products not immediately used by us, but because of the nature of our work offer a potential hazard to our employees. We have in mind various refrigerants. Our men frequently have to enter buildings where refrigerants are used or stored. We all know these chemicals constitute a potential hazard, and it would seem as reasonable for us to attempt the restriction of these products as it is for the National Fire Protection Association to promulgate and propose restrictions for us.

Our industry would welcome constructive suggestions from any group. The tentative draft of this proposed Model Ordinance to be considered at the meeting in Atlantic City, contained among the "good practice regulations recommended for adoption by regulatory body," suggestions such as these: "*Precautions Against Fire:* While space is being sealed and during the fumigation and ventilation period, the use of matches, lights with unprotected flames, and smoking, shall be prohibited. Only (approved) electric flashlights shall be used in the premises for light during the actual fumigation operation unless the electrical installation complies with Article 32 of the National Electrical Code, for locations where flammable vapors may exist." Another provision called for the following: "In all cases the main gas control valve shall be closed, prior to the actual fumigation operation."

Another provision which we feel would tend to jeopardize the life of the fumigators, called for the closing of doors, division walls, etc., which would retard the action of the fumigant, increase danger to the fumigator, as it would prevent him having easy ingress or egress from room to room after the fumigant was discharged or released. Another provision was as follows: "The manufacturer's directions regarding the use of fumigants shall be adhered to, and no larger quantity than that recommended shall be used."

As an industry, we do not ridicule the undoubtedly sincere efforts of those responsible for such suggestions. We do, however, cite a few of these proposed features, which are impracticable and indicate a complete lack of understanding of the problem they are trying to cope with.

Because of the limitation of time only, the Legislative Committee of the National Association of Exterminators and Fumigators was unable to submit their criticisms and suggestions. Several within our industry who had the opportunity to read the proposed Model Law, sent their objections to Mr. William O. Buettner, President of the National Association, who had a conference with Mr. H. S. Smith on the subject.

Mr. Buettner sent a letter under date of May 4th to Mr. Smith outlining some of the criticism with the request that no final action be taken until the Committee on Legislation had an opportunity to study the proposed Model Ordinance. The general thesis of Mr. Buettner's remarks was that our trade would cooperate with any agency making suggestions, but for the present no endorsement could be given any model ordinance until the industry in convention had opportunity to act upon a report of the Committee on Legislation, which report, it was felt, will have taken into consideration proposals that could be sponsored by the United States Public Health Service.

We will watch with much interest the action taken toward the suggestions submitted. We trust proper consideration will be given our industry, and assure the National Fire Protection Association, we are always willing to assist in any manner we can. Our position is clearly that of sponsoring legislation which will be fair for the legitimate exterminators and fumigators who have a natural interest in using chamicals as they should be used so that the health and safety of the public is paramount in all efforts for the best results.

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The Code and the National Association

Possibly in anticipation of much publicity which has recently appeared in the newspapers and has undoubtedly been read by all firms of the exterminating and fumigating trade, lies the answer in not having a signed code by this time. At least such publicity on the general subject of service trades would tend to make one surmise that it had something to do with our code not being pushed to conclusion for the President's signature by the NRA officials. When it is considered that the vast majority of the exterminating, fumigating and disinfecting trade were willing to cooperate if the code as revised at the hearing was adopted, it becomes difficult to explain this delay.

What is not generally known, however, by the industry at large is the amount of detail required in connection with briefs that had to be submitted to further substantiate the position of the industry, as a whole. With such details, there is involved considerable correspondence as well as conferences necessary to clear up other points that arise. Mr. Bogorad has faithfully kept in contact with the NRA officials and kept the officials fully informed as to what is absolutely necessary if our industry were to remain in business.

It is our understanding that the only difficulty standing in the way is a rather arbitrary attitude assumed by the Labor Board that our industry could operate on a straight 40-hour week and if not the straight 40-hour week, then a straight 44-hour week, inclusive of travel time. The National Association has at all times maintained the attitude that every resource has been exercised in the matter of hours that have been requested. Only after most careful study, conferences, conventions and voluminous correspondence has it been made very clear that utmost compromise has been reached in making the request for 44 hours and willingness to pay overtime in excess of 44 hours. Our industry does not lend itself to being chopped off at the end of any definite number of hours. There are days when less hours are worked and others when the very nature of a job makes it necessary to work in excess of the maximum hours of 44 in an average week. Many firms still feel strongly that more than 44 hours should be granted.

A few localities have seasonal rush. In other localities there are rush jobs which must be done. In hardly any instances can a firm be expected to pick up "Tom," "Dick" or "Harry" from the street to finish a job, nor either would "Tom," "Dick" or "Harry" be of much assistance with qualified exterminators and fumigators on such jobs. Very plainly it would appear that a few individuals know more about our industry than those actually engaged in the conduct of the business. By the same reasoning, it cannot be argued that because one, or a few firms, might find it impossible to comply with any straight number of hours per week, is it possible for all firms to comply similarly. The facts in the case are that there are a mere handful of firms that employ sufficient number of employees so as to permit any straight number of hours per week.

One very important matter that is not constantly stressed but can be said to further make demands for at least the hours requested, is that our industry has many individual owners who would be scot-free to work limitless number of hours. Who would say that such individuals could be controlled as to number of hours? Who would deprive such person of his livelihood? It is not so much a quarrel over hours with such "one bag men" because hours largely adjust themselves, but nevertheless, there is an advantage in that no real control can be exercised. Trade practices would further equalize any injustices as to hours, but if anything less than the hours requested in the Code should be adopted, no equalization would be possible.

To summarize, then, a code is only fair as it has taken into consideration the realistic problems so that the provisions will not unduly work hardships on any particular class of firm, whether it be "one bag," the average firm employing 2 to 5 men, or the firm employing more than ten men. No group can be so small as to work for thoroughly individualistic aims, but rather should it be conceded that any legitimate and qualified exterminator and fumigator is entitled to be in business.

Similar discussion can be entered into as to wages. Here again there has been an attempt to have a higher minimum wage included than which was requested. On the other hand, there is just as much sentiment that wages be less. The result was again that of "give and take." The compromise speaks for itself.

The industry might better express its appreciation to the many who have tried to assist and have assisted. The Code requested was not something hurriedly thrown together, but rather an honest expression of general sentiment with utmost compromise made so that unity prevails in the matter of standing by the revised code as requested at the hearing. Anything short of what the industry as a whole feels would mean no respect for the code.

At this writing, attempt is being made to ascertain what definite policy is to be pursued as to ultimate action on service trades, and more particularly the code of the exterminating, fumigating and disinfecting trade. These are firms which prefer no code; there are firms which prefer a code. There is an attitude that to enforce a code for our trade will be difficult—the chiseler will remain. One thing, however, is certain, and that is that most firms cannot consistently comply with the terms of the hours that are called for in the President's Re-Employment Agreement. Exceptions will be requested but more fundamental than having knowledge of exceptions being requested, is to be more thoroughly informed as to what action will be taken on such requests. We recall the difficulty in the early stages of the "Blue Eagle" when from pillar to post, firms and one local society, sought exceptions. The general answer then was to hold request until National Code was signed. Just as soon as definite information is available, the industry will be informed.

THE NATIONAL ASSOCIATION

Primarily attention has been given to the Code. Correspondence has meant daily attention. When it is considered that this work is being done entirely by volunteer services on the part of individuals throughout the industry, to some of whom it means a sacrifice in giving time from their own business, the firms throughout the country should feel highly pleased. Consider what some of the work would have cost. What little expenses there are, are being paid from the National Association treasury. Our only means of support is the membership dues.

Secondly, legislation has given considerable work. From various sections of the country came requests for information. In the main, it is being urged that postponement be requested until such time that the Committee on Legislation is prepared to submit a report on what will substantially amount to a model ordinance.

The subject of legislation has been dealt with in another article which appears in this issue of The Log. It is our firm belief that there is entirely too much agitation on the subject of legislation. The Committee is accumulating information from all sections of the country, preparatory to presenting what might be termed a model ordinance. Such ordinance rightfully should be the expression of the trade and for this reason, the National Association feels that our proposal should be submitted to the trade.

There is in process a general letter which will be sent to the membership which will contain information of value.

It is urged that firms throughout the country avail themselves of the National Association, if any aid is desired.

DIAMOND STOLEN BY RAT

A valuable diamond ring "stolen" by a rat from Mrs. Gordon Beaver, four years ago, has been recovered.

Four years ago while making bread for the noonday meal, Mrs. Beaver placed her ring on a kitchen shelf. Later during the day when she looked for the ring it could not be found. A thorough search of the house failed to reveal the trinket.

Last year Mr. Beaver, a prominent merchant, erected a new home just across the road from the house in which the ring was lost.

Several days ago a neighbor noticed something sparkling through an attic window of the old home. Curious, he and Mr. Beaver investigated. They found the long lost ring in a rat's nest near the window.

Mrs. Beaver thinks a rat, intrigued by the shining diamond, carried off her ring, probably as a plaything for her young.

How much damage does one rat do in a year's time in private homes? It is estimated that each rat does two dollars worth of damage in a year.

Fumigation of Foodstuffs

By DR. C. L. WILLIAMS*
Senior Surgeon, U. S. Public Health Service
New Orleans, Louisiana

The fumigation of foodstuffs has reached proportions that render it imperative that we take specific notice of its effect on the public health. Available data do not permit of precise statements, but from figures furnished by manufacturers of fumigants it is estimated that during the year 1931 there were fumigated in the United States 700,000,000 cubic feet of building space (mostly warehouses, flour mills, etc., containing foods), 500,000,000 pounds of commodities (mostly foods, in fumigation chambers), 4,000 ships (many of them loaded), and 7,000 railway freight cars (loaded and empty). These figures are conservative. The practice is growing, so that it is believed the figures for 1932, when compiled, will be larger by from 10 to 25%.

Except for the destruction of rats on ships, there is hardly at present any direct or specific public health purpose involved in fumigation. It is employed almost exclusively to destroy vermin that for one reason or another constitute an economic loss; largely, there is the destruction of various insects infesting foods.

There are two principal processes; one is fumigation at atmospheric pressure; the other is fumigation in a vacuum chamber. The vacuum process insures penetration of the fumigant into practically any package that can be put into the apparatus; the treated material may absorb as much as 80% or 90% of the gas. When fumigation is at atmospheric pressure, much smaller proportions are taken up, while penetration into different types of materials varies greatly and requires much longer time.

There are quite a number of fumigants used in commercial practice at present, but only a few to any considerable extent, these being hydrocyanic acid, sulphur dioxide, carbon bisulphide, ethylene oxide, ethylene dichloride and chloropicrin. All of these are gases at ordinary temperatures or are converted to gases by simple evaporation; all are poisonous, in some degree, to all forms of animal life; all are absorbed to some extent by the materials that are fumigated. Continued aeration will remove the greater part of the absorbed gases, but here is considerable variation as to the time required to accomplish this.

The varying toxicity and speed of action of these gases is reflected in the varying concentrations and periods of exposure employed. In commercial practice, these factors tend to balance one another, the more toxic and quickly acting materials being used in smaller amounts and for shorter periods.

ABSORBED GAS

The one fumigation hazard peculiar to the treatment of foodstuffs is the absorption of gas in the fumigated material. This has been known for years, but the subsequent effect on consumers has never been completely and authoritatively determined. While hydrocyanic acid, because of its high toxicity, naturally has attracted attention, other fumigants have not been so closely studied. The thought has appeared that if hydrocyanic acid may be safely used, other materials of lesser toxicity are harmless. This may not be true; other gases must be used in heavier concentrations and their mechanism of poisoning is different.

Absorption of fumigants is dependent on quite a number of factors, the most important being the process, concentration of gas, length of exposure, temperature, and the presence of moisture. Fats absorb larger amounts of those that are fat solvents. Por-

(Continued on Page 10)

*Address before American Public Health Association, October 26, Washington, D. C.

CALCYANIDE

HYDROCYANIC ACID gas is recognized as the best fumigant for the destruction of such insects as bedbugs, clothes moths, tobacco beetles, etc.

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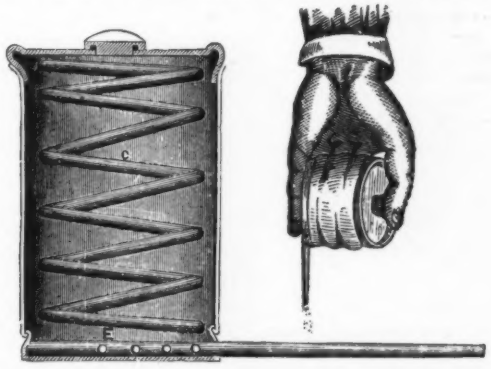

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GETZ EXTERMINATORS, Inc.
1135-39 Pine Street St. Louis, Missouri

Fumigation of Foodstuffs

(Continued from page 9)

osity increases the speed of absorption. All of these also effect the rate of subsequent dissipation.

Three things may happen to gas absorbed in foodstuffs; the gas may be retained in its original form; it may be given off when the food is removed into fresh air; or it may become chemically combined with the ingredients of the food. As regards the first and second possibility, the status at any one moment is a matter of time. When fumigated foods are removed into the open air, the absorbed material immediately starts to pass into the air and eventually all that is in a free state will be so dissipated. While it has been noted in some cases that fumigant combines with certain foods, hydrocyanic acid with levulose and ethylene oxide with water being demonstrated instances, the data at hand indicate that in practice this occurs only to a quite limited extent.

The problem of absorbed fumigants has been studied principally by chemical methods. Studies have usually been carried out by fumigating samples of foods with varying amounts of the fumigant for varying periods, and determining at intervals thereafter the amounts of gas remaining in portions of the sample. This method would have supplied us long ago with a definite answer to the problem were it not for the failure to determine whether the fumigant found in fumigated foods was actually poisonous when consumed. In the few instances where such tests were made, no poisoning could be detected. Most of these instances are concerned with foods that actually absorbed or retained relatively small proportions of the fumigant.

ABSORPTION HAZARDS

The fumigant absorbed in foodstuffs may become a hazard in two ways. If stored in a closed space, evolution of the absorbed gas may produce a lethal or toxic concentration in the air of the storage chamber. This is a danger that is often given entirely too little thought, though it is far more real than the other hazard, that is, poisoning of consumers by retained gas. So far as published data go, there have been a number of fatalities from released gas, but there is no instance on record, of which the writer is aware, of any human being ever having been killed by eating fumigated food.

The absence from the literature of any report of death from consuming fumigated foods is remarkable and deserves particular emphasis. Quite a number of writers have given their attention to this subject, so that there has been no lack of search. The only reasonable conclusion is that no such deaths have occurred. Evolution of gas in storage is a hazard that is not peculiar to foods and so will not be further considered here.

The presence of any considerable amount of absorbed fumigant can be detected by smell or taste, particularly (due to evolution of the gas) the former. Trained fumigators find the sense of smell a reliable test, the practical experience of years bearing out the belief that when the odor of a fumigant has disappeared, the amount still retained is small.

HYDROCYANIC ACID

Because hydrocyanic acid is the fumigant that has given rise to the most concern, it is believed advisable to discuss it in more detail. The effect of hydrocyanic acid fumigation on foodstuffs was recently investigated and the data at hand reviewed by Monier-Williams[1] for the International Commission on Fumigation of Ships, sponsored by the League of Nations and the Office International d'Hygiene Publique.

Largely because of the lack of data as to actual poisoning by absorbed hydrocyanic acid, Monier-Williams was quite conservative in drawing conclusions as to permissible content in foods. The Commission, in its report,[2] was equally conservative, stating that the content of 20 parts per million of hydrocyanic acid in food probably does not affect the health of the consumer. As a matter of fact, considerably larger amounts than this have undoubtedly been consumed on numerous occasions without any effect whatever being noted on the consumer. The German and French regulations permit the importation of Rangoon beans containing as much as 300 parts HCN* per million. These regulations, however, take into consideration the fact that the beans are cooked before consumption.

For many years, it has been a common practice for fumigators to eat food immediately after fumigation; in fact, on ships, the writer has known fumigators (protected by gas masks) to go into compartments under fumigation and bring out food to be immediately consumed. In such cases, however, the concentration of gas used was not high—seldom over .2 volume per cent of HCN. However, Moore[3] reports instances of fumigators consuming candies and nutmeats fumigated in a much higher HCN concentration—1 volume per cent—within a few minutes of their removal from the fumigation chambers, without any signs of poisoning being noted. The writer has frequently eaten fumigated foods within a few minutes of their removal from the gas, and has noted that in the dry foods such as crackers there was no taste of HCN, but that sometimes in fruits such as grapes and apples the gas could be detected, presumably more through odor than taste. Fruits that were eaten after peeling showed no signs of gas.

The relatively few animal tests have all been negative. Some years ago, the Public Health Service[4] fumigated bread and milk with gas concentrations up to .4 volume per cent, and fed it to mice—in some instances immediately after fumigation, and in others after a period of airing. The conclusions were that in no cases were the mice affected by food that they ate, but in some instances when placed in jars with unaired fumigated food, they were killed by breathing the gas evolved therefrom.

Swanson and Working[5] cite experiments wherein fumigated grain was fed to chickens. In nearly all of these cases, the grain contained about 20 parts HCN per million and was fed to the test animals over periods of several days to two or three weeks. In no instance could any poisonous effect be noted. Buttenberg and Weiss[6] fed fumigated foods containing from 10 to 30 parts HCN per million to men in place of their regular diet, over periods up to one week, without noticeable effect. Lutrario[7] fed fumigated food containing 20 to 100 parts HCN per million to dogs, in approximately 500 gram portions, without effect. Other instances might be cited, but they are all of the same order.

As against this data we have a considerable volume of chemical determinations which have shown that the amount of HCN absorbed varies very considerably. In some instances, immediately after fumigation as much as 2,000 parts HCN per million were found. While this was exceptional, it has not been unusual to find as much as 100 or even 200 parts HCN per million. More

(Continued on page 15)

*HCN is the chemical formula for hydrocyanic acid.—Editor.

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History of Termites and Termite Control

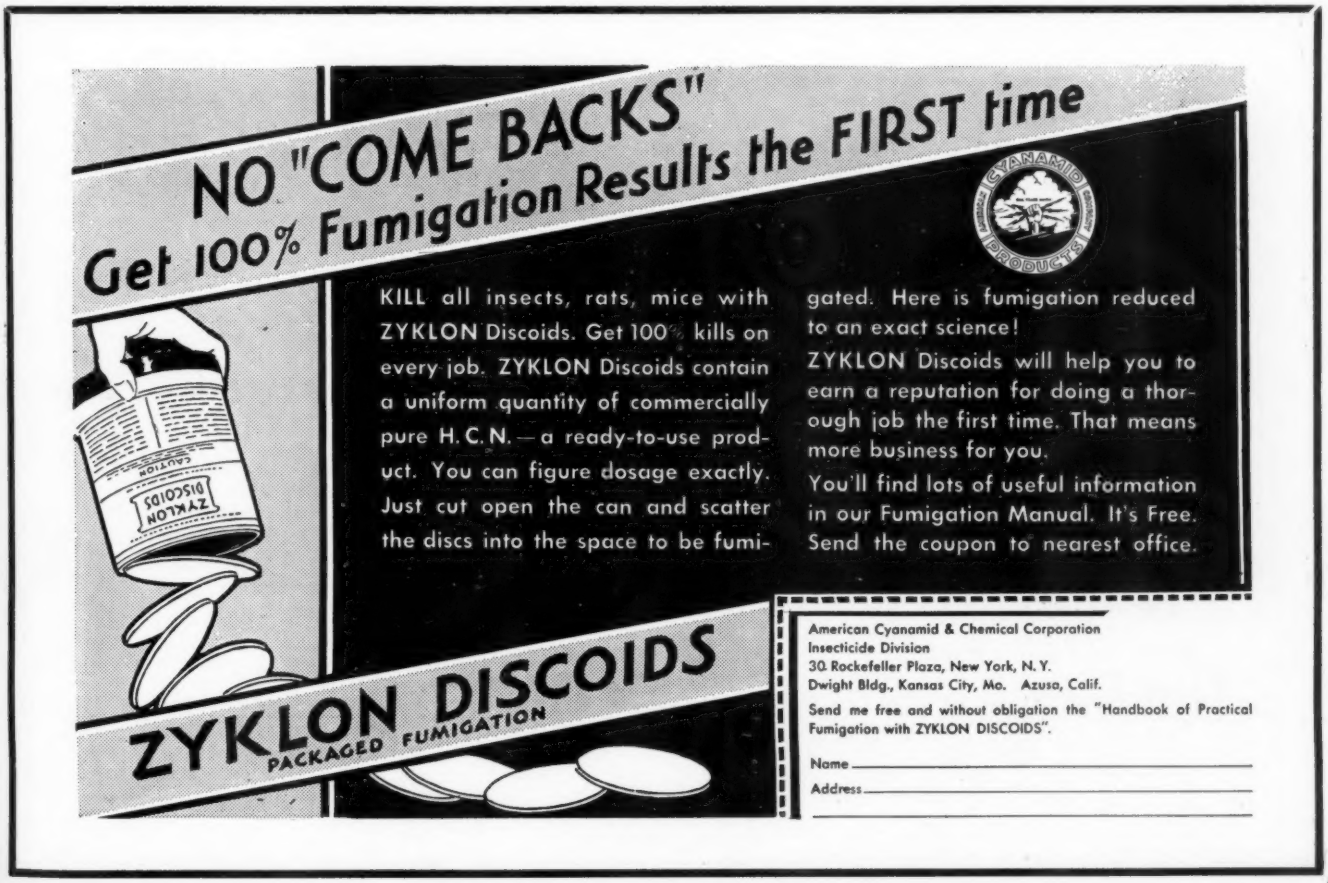
By J. R. SHARP, Kansas City, Missouri

The Termite is the most intelligent and destructive insect known to science. The worker of the termite colony is blind yet they can detect wood wherever it is. A post driven in the ground will be infested with them in a very short time if it is not treated first. They have such an extraordinary sense of smell that they can go right to a piece of wood laying on the ground and in a very short time eat the cellulose leaving only the pitch content of the wood.

The University of California has the only laboratory in the United States on termites and their control. They have been experimenting for years with termites and have, for the first time since they started their experimenting, published a book on TERMITES AND TERMITE CONTROL. This book contains 734 pages and was published in January of 1934. In 1927, Professor Charles A. Kofoid, of the University of California, stated that judging from the number of specimens of termites sent to his laboratory, that he thought it possible that we were experiencing a "flare up" in termite activity. Since then it has grown rapidly worse until now it is a serious problem.

One colony of termites will not mix with another colony, due to the fact that some colonies of termites are diseased and they will not mix for fear of getting these diseases. The soldier of the colony has a milky white, sticky substance which serves mechanically to entangle and impede the enemy, and is reported to have a powerful chemical effect on the insects touched by it. In this way they protect the workers and the rest of the colony from invasion by other insects, such as the ant which is their greatest enemy. This substance flows through a more or less distinct groove down the front of the head to the mouth parts, where it becomes distributed on the jaws and is thus transmitted to the enemy.

The winged reproductives, or alates, appear at a characteristic period in each year in all normal colonies of two years of age or more. They may be present in the colony for three months before swarming, awaiting a certain combination of physical conditions, particularly warmth and soil moisture. When these external conditions arrive, the colony as a whole is stimulated to feverish activity. The alates are now characterized by a complete reversal of instincts; instead of the strong instinct to flee the light, they are strongly attracted to it and seek to emerge into the open. The workers construct openings to the outside, thus behaving in a manner contrary to their usual deep-rooted habit of keeping the colony dwelling entirely closed. Through these apertures the alates, or swarmers, as they are sometimes called, push their way out into the open and take wing for a brief time, lasting usually but a few minutes. In which time they mate. Then they come back to the ground and burrow in some place, preferably an old tree stump, where they form a new colony and they become king and queen. They will then infest another house or building.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Even Radio Fights Termites Now

The Bruce company has licensed forty-three companies in its Terminix division, operating in 125 cities in the 26 states most heavily infested with termites, to offer this service.

The message that the radio program is bringing to owners is that wood damage is often mistaken for rot when really it is not due to faulty lumber, but to termites, that these termites are a serious menace but can be combated successfully.

The industry does tune in the program and likes it, evidently, for in response to an inquiry by the American Lumberman as to the success of the venture an official of the company replied:

"We have been well pleased with the response to this program. Letters and telegrams commenting favorably on it have been received from all over the country. Although the first broadcast took place only last Thursday, we have already received a great number of requests for the free termite inspection. Our license Terminix companies are daily reporting increasing interest and increasing business, which can be traced directly to the radio program in most instances. The reception accorded the Terminix radio program so far has more than met with our expectations.

Thursday night, April 12, the E. L. Bruce Co., of Memphis, Tenn., started using sixteen Columbia Network stations in the central and eastern parts of the country, to tell property owners about the destruction caused by termites.

The "Terminix All-Star Program" features Clarence Wheeler and his Terminix Orchestra, the Cadets Quartet and Doris Lorraine, with Jean Paul King as announcer, and originates in the CBS studios in Chicago, starting at 9:30 p. m., Chicago time. May 3 and subsequently, the program will start at 9:30 central daylight saving time, 8:30 central standard time, 9:30 eastern standard time, and 10:30 eastern daylight saving time. The stations over which the Bruce program will be presented include:

Eastern time: Baltimore, Md., WCAO; Charlotte, N. C., WBT; Cincinnati, Ohio, WKRC; Jacksonville, Fla., WMBR; New York, WABC. Central time: Atlanta, Ga., WGST; Birmingham, Ala., WBRC; Dallas, Tex., WRR-KRLD; Little Rock, Ark., KLRA; Louisville, Ky., WHAS; Memphis, WREC; Nashville, Tenn., WLAC; Oklahoma City, KOMA; San Antonio, Tex., KTSA; St. Louis, Mo., KMOX; Wichita, Kas., KFH.

It is interesting and refreshing to note that in its radio advertising this outstanding producer of lumber and oak flooring does not try to "shush-shush" the fact that lumber is susceptible to attack by these insects. The Bruce company faces the fact and thus openly admits it, preferring that Bruce, and not the manufacturer of some material competing with wood, should be the one to tell the American public about it.

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Exterior Shaw's Gardens - St. Louis, Missouri

Fumigation of Foodstuffs

(Concluded from page 10)

than 100 parts per million appear practically only in foods fumigated by the vacuum process, or, at atmospheric pressure, with concentration of the gas greater than the usual limit of 1 volume per cent. In the former case, it is usual commercial practice to air-wash, in the vacuum chamber, goods designed for shipment within a short period.

When fumigated foods are cooked prior to being eaten, retained hydrocyanic acid is reduced to a negligible figure, the high temperature necessary for cooking causing it to be rapidly dissipated. The fatal dose of hydrocyanic acid is generally placed at 60 milligrams. It will be seen, therefore, that when a food contains 100 parts per million, it would be necessary to consume 600 grams of it to ingest a fatal dose of the poison. This amount is a rather large portion of any one food.

Hydrocyanic acid inhibits the consumption of oxygen by the tissue cells. The poibody in less toxic substances and in part by son is in part removed by conversion in the elimination, most rapidly through the lungs. Its inhibitory action on oxygen consumption depends largely on the concentration present, so that toxic action is measured by the balance between the rates of absorption on one side and of chemical and elimination on the other. It will be appreciated, therefore, that poisoning by way of the stomach is dependent more on the rate of absorption than on the total amount of HCN ingested. An amount poisonous when taken in concentrated form might be totally innocuous when mixed with a large quantity of food.

Furthermore, if the food contains sugars, a still larger amount of HCN may be taken with it. it having been shown that sugars eaten with or shortly before consumption of HCN definitely reduce its poisoning effect.

According to data at hand. only small amounts of HCN are fixed in foods by combination with levulose. In consequence, the removal of this gas from fumigated foods is relatively complete if sufficient airing is permitted before the food is consumed. As as rule. twenty-four hours'. ventilation gives a safe margin. The potential menace is the factor of the time between completion of the fumigation and consumption of the food. Consideration of this factor at once removes certain fumigations altgether from the dangerous list. Prominent among these are fumigations of grain in storage, fumigations of flour mills. and. in fact, fumigation of practically all foodstuffs at the place of manufacture.

When we go to fumigations of foods at the point of sale. however. the time interval before consumption is much shorter. For example, the fumigation of a grocery store on a Sunday may be followed by sale of some of the stock next morning. A still shorter interval would occur when a dwelling is fumigated without removal of the household food stores and a meal is prepared from these immediately after the family is readmitted to the premises. While it would appear, from some chemical determinations, that such practice might be dangerous, no instances of actual poisoning have ever been reported.

ETHYLENE OXIDE

During the past few years, ethylene oxide has come into considerable favor as a fumigant for foodstuffs. Being necessarily used in much heavier concentration than HCN, more of it is absorbed, but this increase is balanced by its much lower toxicity. Ethylene oxide is stated to have a narcotic action. It is known to be locally irritant to the stomach and lungs, and probably to other tissues. Furthermore, in the presence of water it forms, at ordinary temperatures, a limited amount of ethylene glycol, which in the body is in part oxidized to oxalic acid, a well known poison.

As in the case of HCN, however, it has been clearly shown that the minimum poisonous dose is in excess of the amount retained in foods, either as the unchanged gas or as ethylene glycol. In the first place, the retention of about 5,000 parts per million would be necessary to include a poisonous dose in a 500-gram portion of food, while to be poisoned by the ethylene glycol, that might be formed, a man. on the basis of any reasonable computation,[8] would have to consume some hundred pounds of the fumigated food at one sitting. According to Schwartz and Decker,[9] 90 per cent of absorbed ethylene oxide is removed by twenty-four hours' aeration.

What has been stated with regard to hydrocyanic acid and ethylene oxide applies in general, to the absorption and subsequent health menace of other fumigating gases. Space does not permit a descriptive account of all of the fumigants mentioned, but it may be stated for all fumigants now in general use that there exist at present no specific data to support any contention that these fumigant gases absorbed in fumigated materials are a menace to consumers. While the volume of fumigation of foodstuffs is high, report of morbidity or mortality from the consumption of fumigated foods is to date zero.

NEW FUMIGANTS

In view of the statement just made, it is well here to sound a warning. Chemical progress is constantly supplying us with new compounds, and it is to be expected that new fumigants will appear from time to time. What changes they may produce when used to fumigate foodstuffs can be determined in each instance only by careful investigation. which should always precede their introduction into general use.

Chemical study has shown that many of the fumigants. notably hydrocyanic acid, are absorbed in considerable amount by water. In consequence, it would not seem advisable to fumigate moist or liquid foods that would be consumed shortly thereafter. For example, in the fumigation of a restaurant, it would be wise to remove all milk. milk products, butter, and any other liquid or quite moist food that would likely be consumed shortly aftter the fumigation had terminuted, particularly foods that would not first be heated.

CONCLUSION

While one prefers to base definite statements on careful scientific determinations, yet it is not proper that we ignore practical experience when it all points in the same direction and its volume is sufficient to adequately cover variable circumstances. Fumigation of foods has been practiced now for a generation. The aggregate volume of fumigated foods is large; yet, no one has pointed to a single instance of death or even illness among the subsequent consumers. It would certainly seem, therefore, to be a safe conclusion that fumigation of foodstuffs dos not constitute a public health menace.

So convincing is the large volume of negative evidence that the Surgeon General of the Public Health Service felt justified, in 1930, in stating: "This Bureau is not acquainted with any evidence of harm to human beings from the use of food products that have been treated by the cyanide method. . . . It seems that the experience of many years covering the use of this material furnishes us with better evidence of harmlessness than would be secured by much experimental work."

While there is not the same volume of data as regards other fumigants, all of it to date points to a similar conclusion. As a control of food stuff fumigation, there wuld appear to be but one regulation reasonably justifiable; that would be that after fumigation, foodstuffs, before consumption, sale or shipments, should be ventilated not less than twenty-four hours and until the fumigant is no longer detectable therein by taste or smell.

REFERENCES

1. Monier-Williams, G. W. The effect on foods of fumigation with hydrogen cyanide. Reports on Public Health and Medical Subjects, No. 60, Ministry of Health, Whitehall, London.

2. Commission on Fumigation of Ships, Report, Quarterly Bulletin of the Health Organization of the League of Nations, June, 1932.

3. Moore, William. Report on the use of hydrocyanic acid in fumigation of foodstuffs. American Cyanamid Company, New York.

THE NATIONAL SEAL

Correspondence coming from several indicate that many are beginning to use the National seal. The prestige which goes with

the use of the National seal stamps firms which will begin to feel a recognition from their clients and as well as prospective clients.

Only members of the National Association of Exterminators and Fumigators who are in good standing are permitted to use the seal.

For any members who require the seal, payment of $1.00 made to the secretary, Mr. Irving Josephson, 480 East 163rd St., New York, N. Y., will bring the seal by mail.

Picked Up From Here and There

Here is a cheerful note. Due to increased business the Abbott Exterminating Company, Inc., formerly located at 110 West Fortieth Street, New York City, have moved to larger quarters and are now located in the National City Bank Building at 17 East Forty-second Street, New York City.

Sudex Company, W. I. Levy, President, have more than doubled their quarters. Formerly located at 521 Fifth Avenue, New York, their new location is now 62 West 47th Street, New York City. Congratulations and good wishes, Mr. Levy. May you continue to grow and prosper.

The versatile executive secretary of the New York Society, N. K. Concannon, gave a few privileged members of the industry a practical demonstration of his profound knowledge of chemistry. During the code hearing recently held in Washington "Nate" and "Doc" Wilson were discussing the question of the practicability of the use of warning gases in conjunction with fumigants.

Between these two it was not long before varied opinions developed, it was "Doc's" contention that no staple warning gas had yet been developed that was both expulsive and repulsive. "Nate" took vigorous exceptions; indeed, he waxed warm over the subject. The room was clear of all but the disputing parties; bottles were opened with their foreign substance; glasses were produced (this is hearsay only); then Nate did his "stuff." Doctor Wilson left the room with words of amazement and wonder on his lips. Nate was declared a winner.

The gas developed by "Nate" has properties no other gas on the market has, it is not commercially perfected, but sufficiently advanced to have made a profound impression upon those who have come in contact with it. "Nate" is now seeking means of commercializing his product and in his rare moments of leisure may be found working in "Doc's" laboratory on this problem. Good luck, "Nate," the industry awaits developments with interest.

Mr. A. H. Helfgott, President of the German Exterminating Company of Pittsburgh, Pa., was a welcome visitor at the office of the New York Society for the several days he was in New York transacting business with various manufacturers. We suggest this be a habit for others who visit New York—Room 1401 at 535 Fifth Avenue.

Aetna Eterminating Company, formerly located at 2404 Main Street, Hartford, Conn., has moved to 238 Church Street.

C. H. W. Hasselriis, President of Ratin Laboratory, Inc., of New York and active member of the New York Society of Exterminators and Fumigators, acted as the master of ceremonies for the one-hour program with which the National Broadcasting Company and their network of stations paid tribute to the memory of Hans Christian Anderson on April 2nd.

Anniversary Banquet of the Brooklyn Real Estate Board, held at the Hotel St. George, April 17th. Among the group were: Herman, Monroe and Sydney Apfelbaum of the General Exterminating Company; Joseph A. Billings and Charles A. Dixon of Deco Exterminating Company; William A. Elliott, Roach Exterminating Company; William O. Buettner, Oscar G. Buettner & Son; N. L. Fremed and J. I. Cutler of the Sameth Exterminating Company; Arthur O'Connor of the United Exterminating and Chemical Company; David Glass of The Continental Exterminating Company.

The industry learned with deep regret of the passing on of A. S. Hicherson of the Edgar A. Murray Co., of Detroit. Mr. Hicherson was stricken with pneumonia at the home of his son, Sanford B. Hicherson, at Baytown, Texas. Mr. Hicherson was seventy years of age, and was a well-known and active member of the industry.

Mr. Edgar A. Murray, President of the Edgar A. Murray Co., Detroit, Mich., has been on a business trip which included New York, Philadelphia, Baltimore and Washington. While in New York, Mr. Murray made several visits to the offices of the New York Society of Exterminators and Fumigators, discussing matters of legislation and general business. Mr. Murray was the prime mover and one of the men largely responsible for the new amendment to Postal Laws as they relate to the use of the mails for insecticides.

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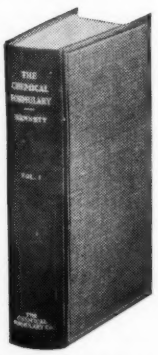

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These headings do not cover entirely the contents of The Chemical Formulary. Hundreds of other formulae are included. Even a languid perusal of its pages cannot fail but give one at least a few valuable ideas.

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Items of Interest

TERMITES AND TERMITE CONTROL

The report of the Termite Investigations Committee is a notable example of what can be accomplished when scientists, engineers and business men cooperate in an effort to solve a problem involving public good. Termites and Termite Control is a book which no commercial exterminator interested in the problem should be without. It is written in simple, non-technical language that the industry can readily understand.

The destructive habits of the termites are faithfully described, and the question of effective means for the extermination and control of these insects is thoroughly discussed.

The immense amount of human experience, patience and labor that has gone into the gathering of the material for this book will be immediately apparent to anyone who even casually glances through it.

This book is published and sold by the University of California Press, Berkeley, Cal. The price is $5.00. This is mentioned because of our desire to disseminate information of worthy publications or products we feel would be beneficial to the industry.

We are advised that the University of California Press expects to be completely sold out of this edition by mid-summer and the publication of additional copies is very problematical.

An interesting and difficult test was conducted when the Yacht Vecuna was fumigated in the Marine Basin at Brooklyn, N. Y. It conclusively proved the efficinecy and effectiveness of Malium as a fumigant for the destruction of insect life as well as demonstrating its comparative harmlessness to people.

The fumigation was conducted by The Ozane Co., Inc., of 555 West 22nd Street, New York, who are licensed fumigators in New York City, who had the job.

Officials of The Michigan Alkalai Co., manufacturers of Malium, the New York Health Department, The Exterminating Materials Co., who are distributors of Malium, yacht captains and owners, as well as representatives of other commercial fumigators were present.

To those who have used other fumigants Malium was a revelation. They were astounded when the fumigators from the Ozane Company boldly walked into the sealed vessel and set off the gas and then remained inside the cabin just to show that the gas would not hurt them. Again when the boat was opened the fumigators entered the vessel without gas masks or protection of any kind and closed the door behind them and stood around talking inside the cabin, making no effort to open doors or windows or portholes. When the doors were finally opened, the vessel ventilated in practically no time at all, leaving no trace of odor of gas. Most important, no vermin of any type was found alive.

This is certainly a mighty step forward in fumigation, when security for human beings and assuredness of complete vermin extermination are secured.

The Exterminating Materials Co., of 712 Amsterdam Avenue, New York City, the distributors of Malium, have an interesting booklet giving details of this new gas.

FIRM TO KILL RATS IN CITY HOSPITALS

New York City: Eight firms wanted to kill the rats in the city's 26 hospitals—but of the eight bidders the United Chemical and Exterminating Co., 106 E. 19th St., wanted to most. At least that company made the lowest bid, and accordingly Commissioner of Hospitals Goldwater announced yesterday it will be given the contract. The company's bid was $18,660.

Racing cochroaches were transported by airplane from New York City to Southern California to participate in a tournament.

GAS FLOODS BUILDING

Water Thrown on Rat Poison During Fire Raises Fumes

Members of the Fire Rescue Squad and of the Bureau of Combustibles were called out to assist firemen in getting rid of the after-effects of a minor fire in the ground floor apartment of Louis Mandello, a peddler, at 303 East Twelve Street.

Mandello manufactures and sells rat poison and furniture polish and himself extinguished the fire before the firemen arrived. Some of the water he used, however, came in contact with carbon bisulphide and phosphorus, which set up phosgene gas. This gas not only has a highly erosive effect on most materials but is also injurious to the human liver and kidneys and gas mask equipment was called for.

The men wearing the masks practically emptied Mandello's apartment throwing the gas-scarred bedding and other household articles into the street. All the tenants in the three-story brick rooming house were made to leave the building while this was being done.

Mandello was taken to the Fifth Street police station for interrogation by the fire marshal.

The Reilly Tar and Chemical Corporation has just published some very interesting literature on Termites and Wood Preservation. This literature may be had by sending to their office located at 500 Fifth Avenue, New York City.

Other Items of Interest—See Page 18

Local Organization News

NEW ENGLAND ASSOCIATION

A letter from L. West, secretary of the association writes as follows:

After receiving my third copy of the Log, I have decided that we exterminators are very fortunate in having such a magazine published each month, bringing to our attention all matters of vital interest in our business.

At the last meeting of the New England Society we went into deep discussion on what the National Association is trying to do. We are aiming to have 100% membership belonging to the National Association in the near future.

We are greatly indebted to our president, Mr. B. W. Eldredge, who so ably represented us at Washington and fully realize all he is trying to do for us.

To Mr. William Buettner a rising vote of thanks should be given for his unceasing efforts to make the National Association something to be remembered.

We expect to hold a meeting in the near future and now that I have broken the ice, you will probably hear from us more often.

ALLEGHENY ASSOCIATION

A special meeting of the Allegheny Association of Exterminators and Fumigators has been called to discuss the important matter of joining as a group with the National Association. The vote will be in the affirmative, we are sure. This is the kind of cooperation that counts.

Business Opportunities

(Classified)

RATES—For individuals seeking employment, 5c per word, minimum $1.00. All others 10c per word, minimum $2.00. All advertisements must be in the hands of the publishers seven days before publication date and must be accompanied by cash or money order for payment in full. The publishers are not responsible for any false or misleading advertisements.

WANTED TO BUY: Profitable and unprofitable Exterminating Service or Material, business or accounts (with or without your services)—Especially if unprofitable because of lack of volume. Write, giving full details to the Ozane Co., Inc., 555 West 22nd Street, New York City. (Member of National and New York Society Exterminators.)

WILL SELL half interest in a well established Exterminating and sales business, prefer a good termite man or all around exterminator, or will sell outright to someone interested in a good business. Box 200, Exterminators Log.

CUTS of rats, roaches, moths, bedbugs, ants, flies, etc. EXTERMINATORS LOG, Cut Department.

MOUSE PUTS CAT IN JAM

A stray cat became so engrossed in the pursuit of a mouse on the roof of a three-story brick house at 600 Oak Terrace, the Bronx, that it followed the rodent down a drain pipe and finally became jammed in an elbow at the base. An emergency call brought Police Emergency Squad 7, which removed a section of pipe and then the cat, both uninjured. The mouse had disappeared, and it was suspected it had found safety in the sewer.

ANNUAL U. S. RAT BILL NEAR TWO BILLION—Aw, rats!

You may say that sometimes, but did you know the annual board bill of rats and mice in this country is $182,000,000?

This figure is furnished by the government. It is estimated it costs a half cent a day to keep up a rat. On this basis, the rat population of the country is 10,000,000.

But you say "rats" sure enough when you learn rats and mice damage ten times as much as they eat. And that the total cost of these rodents to the country yearly is near two billion dollars.

And this does not take into consideration diseases caused by them and the resulting loss of time, money and life. Rat fever and other infections are caused by rat bite. So is infectious jaundice.

Items of Interest

ARMY OF LADYBUGS DECLARES WAR AGAINST MILLIONS OF PLANT LICE

Farmers Smile While Mother Nature Helps in Campaign to Rid Crops of Pest Menace

This is a story of "bug eat bug"—an interesting tale to farmers, gardeners and florists in Kansas and Missouri.

The rising temperatures in the last week and the rains have brought out millions of lady bugs, often the subject of playful taunts of children, to devour the greater millions of aphis bugs, a type of plant louse which has been playing havoc with flowers, hay and field crops.

H. W. Guengerich, county horticultural agent, recalled old verses which might apply to this modern deliverance from pests as he scanned through biology books in the farm bureau office.

The first he quoted was:

"Big fleas have little fleas
Upon their backs to bite them;
Little fleas have lesser fleas,
And so on, ad infinitum."

"Now that applies to the drive of the Lady Bugs in killing off the fat, juicy little aphis louse," he explained.

Boy Finds Lady Bug

"When the temperatures reached the 70s the first Lady Bugs appeared. My little boy found one of the first ones in our yard, crawling around on the flowers.

"He had a small stick and was pushing the Lady Bug around, chanting over and over:

" 'Lady Bug! Lady Bug! Fly away home; Your house is on fire; your children will burn'."

Guengerich said he recalled then that somewhere in his studies and past experience he had heard that Lady Bugs meant sure death to the aphis lice which appeared when the temperatures were between 50 and 60 degrees.

Aphis Being Destroyed

The following day Guengerich and A. T. Mullins, county dairy agent, went to several alfalfa fields near Independece to study the work done by the Lady Bugs. They found the aphis were being destroyed by the millions by the Lady Bugs.

"Those Lady Bugs saved the alfalfa and other crops preyed on by the aphis," Guengerich said. "I'm glad it got warm enough for them to come out, but, oh, well, I'll get into another bug fight when the codling worms follow the warm weather and start to attack the fruit trees."

—Kansas City Journal-Post.

FIND RATS MAY SPREAD MANY DISEASES

Rats are capable of spreading other diseases beside plague. To most of us plague is nothing more than a word—an unpleasant one but, in the last analysis, only a word. Some of the diseases which rats can convey come nearer home than plague.

Every now and then there is an outbreak of food poisoning which seems to be traceable to rat droppings. Some of the bacteria found in rat droppings are often very closely akin to typhoid fever. Dr. White, a very able British bacteriologist, thinks that when all other supplies of typhoid have failed us, bacteria of the kind sometimes found in rat droppings may supply us with a fresh stock.

Dr. Meyer of the University of California, with the aid of the public health service, recently examined the droppings from 775 wild rats caught in San Francisco. Of the number 58 were found to bear bacteria capable of causing infection. Dr. Meyer says:

"Approximately two per cent of the rats carried bacteria in the intestinal tract and were capable of shedding highly virulent bacilli in their droppings, and thus of infecting food. In the vicinity of slaughter houses and in second-class residential districts, six per cent of the rats were capable of spreading infection in the manner referred to. When young kittens and tame rats were fed with food contaminated with bacteria from the infested rats, the test animals became seriously sick in from 18 to 24 hours."

In a study of rats in Oakland it was found that these animals were capable of spreading five diseases: Hemorrhages, septicemia, plague, rat typhoid and pseudo-tuberculosis. Dr. Meyer called our attention to the fact that San Francisco and Oakland have been fighting rats for a quarter of a century. If their rats are capable of causing all this harm, how much harm are the unexpurgated rats of other places capable of causing?

This study related only to the intestinal bacteria of rats. The animals are capable of spreading skin diseases, cancer, tuberculosis and various kinds of worms. And then, there is the suggestion that the mild, modified typhus fever which we have newly discovered here, but which has been here a long time, lives in rats as a reservoir animal.

All in all the rat is an unsafe animal to live with, as well as a wasteful member of the household. He is a luxury we cannot afford aside from his capacities as a disease spreader.

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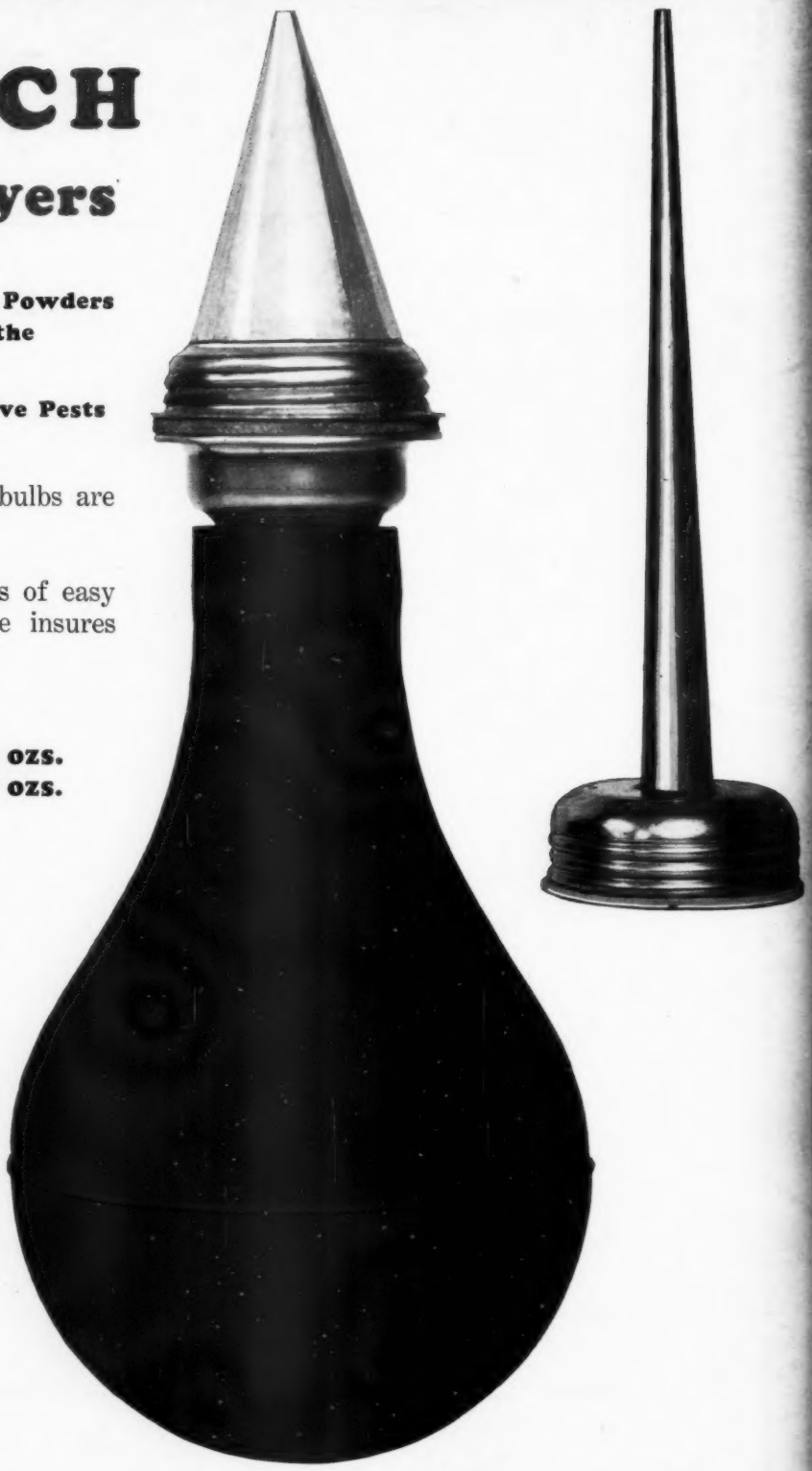

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